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Network Modelling of Functioning System of the Process Module of Oil-Contaminated Wastewater Treatment

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Abstract

© 2015, Asian Social Science. All rights reserved. The article discusses network modeling of oil-contaminated waste water treatment at the stage of the process module functioning of water jet cleaning of waste water in the oil fields and petrochemical industries. Based on the review of the main modeling methods of discrete-continuous chemical processes, expediency of using the theory of Petri nets (PN) for modeling the process of wastewater treatment in the oil fields and petrochemical industries is substantiated. It is proposed to use a modification of Petri nets which is focused on modeling and analysis of discrete-continuous chemical processes by prioritizing transitions, timing marks in positions and transitions. A model in the form of modified Petri nets (MPN) is designed. A software package to control the process for wastewater treatment is designed by means of SCADA TRACE MODE.

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Keywords

Chemical-engineering system, Computer modeling, Modeled systems, Modified Petri nets, Wastewater treatment of petrochemical plants